REMARKS

Obvious typographical errors in the specification have been corrected.

By the foregoing amendments, claims 5 and 21 have been combined. Further basis for the amendment can be found in the specification in the paragraph bridging pages 6 and 7.

Claims 5, 20, 21, 23 and 24 were rejected under 35 USC §103 over JP '103 in view of Dirstine and separately, the same claims were rejected under 35 USC §103 over Ueno in view of Dirstine. Both of these rejections are respectfully traversed.

The present invention relates to a production method for the formation of a laminated type PTC semiconductor ceramic element in which one feature of the invention is the use of a nickel compound. As the Examiner has noted, both JP '103 and Ueno fail to teach or suggest the use of a nickel component. Accordingly, the rejections rely on Dirstine. It is respectfully submitted that this reliance is misplaced.

The Examiner has correctly pointed out that the Dirstine reference teaches that in manufacturing a ceramic compositor from a barium titanate composition, the use of nickel oxide is advantageous because it optimizes the dielectric properties. See column 8, lines 29-31. The present invention, however is designed to provide a PCT semiconductive composition. Adding a material which is intended to improve the dielectric properties is clearly contraindicated in such a composition. Adding the nickel would clearly counteract the semiconductive properties which the present invention seeks to achieve. Accordingly, it is respectfully submitted that one skilled in the art would have no reason or motivation to make the combination proposed in the Office Action and these rejections should be withdrawn.

Claims 6, 7 and 22 were rejectred under 35 USC §103 over JP '103 in view of Dirstine and JP '033. The additional reference, JP '033, has not been cited to overcome the deficiencies in the combination of JP '103 and Dirstine and therefore cannot render these claims obvious under § 103. Withdrawal of the rejection is respectfully solicited.

Claims 5, 14 and 20-24 were rejected under 35 USC §103 over JP '103 in view of either JP '616 or JP '602. This rejection is respectfully traversed.

As the Examiner has noted, JP '103 fails to teach or suggest the use of a nickel component in the mixture used to form a semiconductive barium titanate. JP '602 is concerned with a capacitor, i.e., an element in which the ceramic is a dielectric. JP '616 is likewise concerned with an electronic device having capacitor characteristics (and varistor characteristics simultaneously) and involves adding various materials to a pre-formed titanate. Neither of the secondary references teaches or suggests the use of a nickel component in the mixture which is calcined to form a semiconductive PCT barium titanate. Given the teaching of Dirstine that nickel oxide is used to optimize the dielectric properties of the ceramic, one skilled in the art would not add nickel to a composition (such as in JP '103) intended to be semiconductive.

Claims 6-13, 17-19 and 22 were rejected under 35 USC §103 over "the references as applied to claim 5 above" and further view of JP '033. It is not clear on the present record which "references as applied to claim 5 above" are being referenced. Regardless, the combinations applied to claim 5 have been discussed above and the additional reference, JP '033, has not been cited with respect to the deficiencies in those combinations. Reliance on the additional reference, therefore, does not render the claimed invention obvious.

With respect to claims 8 and 14, the is an additional consideration. There is nothing in any of the references which teaches or suggest use of a nickel content in excess of 0.2 mol% would drastically increase the room temperature resistance value in a PCT ceramic as demonstrated in the working examples of the present application. Employing 0.2% or less, therefore, results in a surprising and unexpected advantage of the claimed method.

In light of all of the foregoing, it is respectfully submitted that this application is now in condition to be allowed and the early issuance of Notice of Allowance is respectfully solicited.

Dated: July 28, 2004

Respectfully submitted,

By Edward A. Meilman

Edward A. Meilman
Registration No.: 24,735
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP
1177 Avenue of the Americas
41st Floor
New York, New York 10036-2714
(212) 835-1400
Attorney for Applicant